

**Rhode Island
Coastal Resources Management Council
Management Procedures:**

Siting Mooring Fields

July 27, 1988

Introduction

The following Management Procedures for Siting Mooring Fields is an appendix to the CRMC's Guidelines for the Development of Municipal Harbor Management Plans. This document is to be used by each municipality when siting mooring fields as required by the Guidelines. This document instructs municipalities on the siting of mooring fields. Ultimate management jurisdiction within each sited mooring field will be retained by the municipalities through the adoption of a CRMC-approved harbor management plan.

1. Definitions

1.1 Approved MHMP are those Municipal Harbor Management Plans which have been prepared by the municipalities in accordance with the Guidelines for the Development of Municipal Harbor Management Plans and formally adopted and recognized by the Coastal Resources Management Council.

1.2 Corner Buoys are those buoys used for marking the outer boundaries of mooring fields. They cannot be used for the mooring of vessels.

1.3 CRMC refers to the Rhode Island Coastal Resources Management Council.

1.4 Guidelines refers to the CRMC-adopted Guidelines for the Development of Municipal Harbor Management Plans.

1.5 Harbor Commission is that commission or locally appointed body which is responsible for the development and/or implementation of a local municipal harbor management plan.

1.6 Harbormaster is the person identified within the local MHMP to assist in the implementation of the local MHMP.

1.7 Moor means to permanently secure a vessel to the bottom of a waterbody by the use of mooring tackle.

1.8 Mooring is a place where buoyant vessels are secured to the bottom of a waterway by mooring tackle.

1.9 Mooring Field(s) are any designated water areas managed by a commercial enterprise, a club, city, or town where five or more recreational craft are kept at moorings.

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1.10 Mooring Tackle is the hardware used to secure a vessel at a mooring.

1.11 Vessel is every description of watercraft, other than a seaplane on water, used or capable of being used as a means of transportation on water. Specifically excluded by this definition are floating homes or houseboats.

2. The Rhode Island State Plane Coordinate System

2.1 Definition

A. The Rhode Island State Plane Coordinate System (RI SPCS) consists of two (2) systems of plane coordinates, established by the National Ocean/National Geodetic Survey, that can be used for defining and stating the geographic positions or locations of points on the surface of the earth within the state. These two (2) systems are known as the "Rhode Island Coordinate System of 1927" and the "Rhode Island Coordinate System of 1983." A more technical definition of these systems can be found at chapter 8-4 of Title 34 in the General Laws of Rhode Island (GLRI), as amended 1956.

B. Consistent with 34-8-9 of the GLRI, these management procedures recognize that the Rhode Island Coordinate System of 1927 may be used up to and including December 31, 1989, but shall not be used thereafter. The Rhode Island Coordinate System of 1983 may be used up to and including December 31, 1989, and shall be the exclusive Rhode Island coordinate system thereafter.

2.2 The Rhode Island State Plane Coordinate System and Mooring Fields

A. All mooring fields must be included within a municipal harbor management plan (MHMP)(Section 320.1 Guidelines). These mooring fields must be described using either the Rhode Island Coordinate System of 1927 or the Rhode Island Coordinate System of 1983. Those municipalities which do not have an approved MHMP before January 1, 1990, must have mooring fields described using the Rhode Island Coordinate System of 1983, as per 34-8-9 of the GLRI, 1956.

3. Siting Mooring Fields

3.1 Location and Area

A. All municipal harbor management plans must include the locations of all mooring fields. Coordinates of at least the corner buoys of each mooring field must be obtained, using the Rhode Island Coordinate System of 1927 or the Rhode Island Coordinate System of 1983 as defined in section 2 above, and 34-8 of the GLRI, 1956.

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B. All mooring fields must be shown on a map with each mooring field's respective coordinates. Preferably, the coordinates of each mooring field should also be shown in an appendix of the MHMP.

C. All municipal harbor management plans must show the total area of each mooring field using acres, square feet, or square meters.

D. Each corner buoy should be referenced to some landmark for general siting purposes for the general and boating publics. The coordinate system points, however, will be the final basis for establishing the location of mooring fields.

3.2 Transfer of Data

A. Describing mooring fields can occur using one of the techniques outlined below. Once the mooring fields have been described, the data collected will have to be transferred to the Rhode Island State Plane Coordinate System. The CRMC has GPS capable for this.

B. Coordinates generated by any of the following techniques will be transferred to the RI SPCS of 1983 by the CRMC at the request of a municipality preparing a harbor management plan. Transfer of data to the RI SPCS of 1983 will ensure consistency with 34-8 of the GLRI.

3.3 Techniques

Municipalities shall describe mooring fields using one (1) or more of the following two (2) techniques:

A. Global Positioning System

1. The Global Positioning System (GPS) involves the use of orbiting satellites around the Earth which transmit ultrastable signals and timing that can be received to obtain a position fix at any instant, either in a fixed or dynamic mode.

2. In the dynamic mode (moving receiver), the expected positional accuracy is on the order of 10 meters. In the fixed mode (stationary receiver), point positioning accuracy is expected to yield one (1) meter or better results. Originally launched by the U.S. Department of Defense to more accurately and timely plot navigation points, the GPS satellite coordinate system can be converted to other coordinate systems as required.

3. Products which access the Global Positioning System have a differential navigation accuracy of three (3) to five (5) meters, depending on the average measuring time of five (5) to ten (10) minutes.

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4. One such product which uses the Global Positioning System to accurately measure navigation points is the "Pathfinder." The Pathfinder will allow information to be collected

from a moving vehicle or a fixed station which can then be processed and transferred to the Rhode Island Coordinate System. The accuracy level of the Pathfinder is equal to that mentioned above: two (2) to five (5) meters.

5. Use in Siting Mooring Fields

a. Although the Coastal Resources Management Council does not advocate the use of one particular product that surveys geodetic points using the Global Positioning System, the potential of the Pathfinder as an aid to siting mooring fields has been studied and has been found to be an accurate and cost effective surveying tool for siting mooring fields. Similar products that utilize the Global Positioning System will be recognized by the CRMC provided that those products are shown to be as accurate as that of the Pathfinder.

b. The Coastal Resources Management Council will allow the data generated by the Pathfinder, or its equivalent, using the Global Positioning System to be acceptable in siting mooring fields and that the data be transferred to the Rhode Island Coordinate System of either 1927 or 1983.

c. When siting mooring fields using the Global Positioning System, the coordinates of at least the corner buoys of each mooring field must be obtained and transferred to the either the Rhode Island Coordinate System of 1927 or the Rhode Island Coordinate System of 1983. Those municipalities which do not have a CRMC-approved Local MHMP by January 1, 1990 must have mooring fields sited using the Rhode Island Coordinate System of 1983.

d. All mooring fields sited by using the Global Positioning System must be shown on a map along with the coordinates for each mooring field.

B. Registered Land Surveyor

1. Proposed mooring field boundaries can be described by a registered land surveyor. The coordinates of at least the corner buoys of each mooring field must be obtained by the using either the Rhode Island Coordinate System of 1927 or the Rhode Island Coordinate System of 1983. Those municipalities that do not have a CRMC-approved Local MHMP by January 1, 1990, must have mooring fields sited using the Rhode Island Coordinate System of 1983.

2. All mooring fields surveyed by a registered land surveyor or stamped by the registered land surveyor.

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3.4 Setbacks and Buffer Areas

A. As described within the Guidelines, setbacks and buffer areas are necessary when establishing mooring fields for various reasons. These reasons include, but are not limited

to, 1) safety in navigation; 2) access to and around federal navigation channels, anchorages, turning basins and harbor facilities; and 3) access of riparian areas associated with waterfront properties and public rights-of-way sufficient to prevent interference of other harbor activities.

B. Setbacks and buffer areas are hereby incorporated into these management procedures for siting mooring fields to ensure the requirements of the Guidelines.

C. All mooring fields must provide minimum setbacks and/or buffer areas from federal navigation channels, anchorages, and/or turning basins sufficient to prevent interference to these, and other, harbor activities.

D. All mooring fields will be sited in accordance with the requirements of the Guidelines and shall establish:

1. Setback limits from any existing federal, traditional, or proposed channel, sufficient to prevent interference with navigation.
2. Setback limits from shoreside structures sufficient to protect ingress and egress from these facilities.
3. Setback limits from riparian properties and shoreline public rights-of-way sufficient to prevent interference with the exercise of private or public rights in these areas.
4. Buffer areas that provide sufficient protection from interference with access and/or use to designated shellfish management areas, traditional fishing grounds as defined by the CRMC, public recreational areas, and conservation areas.
5. Buffer areas from swimming areas or other CRMC-approved MHMP-designated special activity areas.